

## Appendix C

### Biographies

#### HOWARD M. BLOOM

Mr. Bloom received a B.E.S. from Johns Hopkins University in 1965, and a M.S. degree from the University of Maryland in 1967, both in Electrical Engineering. Mr. Bloom has over thirty-six years of experience in the application of information technology to engineering applications with the last 20 years specifically in manufacturing engineering.

Since December 1980, Mr. Bloom has been at the National Institute of Standards and Technology (previously the National Bureau of Standards), an agency of the Department of Commerce. In the early 1980's he was responsible for the development of the information infrastructure that supported the Automated Manufacturing Research Facility (a collection of machining and inspection workstations integrated through a factory network tied to a distributed database environment). From 1984 to 1996, Mr. Bloom was Chief of the Manufacturing Systems Division and directed research and development of Computer Integrated Manufacturing (CIM) applications and interface specifications in the areas of design, process planning, production control and the information infrastructure to support these applications (e.g. distributed database systems and factory networks). During that period, he was instrumental in the development and implementation of the international product data exchange standard known as STEP. For the next three years, he was Deputy Director of the Manufacturing Engineering Laboratory, and in July, 2000 became Acting Director of the Manufacturing Engineering Laboratory.

In this new role, he has the responsibility for satisfying the measurements and standards needs of the U.S. discrete-part manufacturers in mechanical and dimensional metrology and in advanced manufacturing. He serves on several industry and standards boards such as PDES, Inc., USPRO, and IMTI. The laboratory has focussed efforts in basic metrology, manufacturing interoperability, first part correct, and meso/micro/nano manufacturing.

#### LEWIS M. BRANSCOMB

Lewis M. Branscomb is Aetna Professor of Public Policy and Corporate Management (emeritus) and is emeritus director of the school's Science Technology and Public Policy Program in the Belfer Center for Science and International Affairs.

A research physicist at the U.S. National Bureau of Standards (now the National Institute for Standards and Technology) from 1951 to 1969, he was then appointed Director of NBS by President Nixon, and served to 1972, when he was named vice president and chief scientist of IBM Corporation, serving until he retired and joined the Harvard faculty in 1986. While at NBS Branscomb was editor of the *Reviews of Modern Physics*, chief of the Atomic Physics Division, and co-founded JILA, a partnership research venture between NBS/NIST and the University of Colorado in Boulder.

Dr. Branscomb received the BA in physics, *summa cum laude*, from Duke University in 1945 and PhD in physics from Harvard in 1949, when he was appointed Junior Fellow in the Harvard Society of Fellows. He is a director of Lord corporation and is a trustee of Vanderbilt University, Woods Hole Oceanographic Institution, and the National Geographic Society. From 1984 to 1986 was an Overseer of Harvard University.

Branscomb was appointed by President Johnson to the President's Science Advisory Committee (1964-1968) and by President Reagan to the National Productivity Advisory Committee. In 1980 President Carter appointed him to the National Science Board and in 1980 he was elected chairman serving until May 1984. He is a member of the National Academy of Engineering, the National Academy of Sciences, the Institute of Medicine and the National Academy of Public Administration. He is a director of the AAAS, a Councilor of the National Academy of Sciences, and a member of the Governing Board of the National Research Council.

He is recipient of the Arthur Bueche Award of the National Academy of Engineering, the Gold Medal of the U.S. Department of Commerce, and most recently the Okawa Prize in Communications and Informatics. He holds honorary doctor of science degrees from fifteen universities and is a honorary associate of the Engineering Academy of Japan.

Prof. Branscomb has written extensively on information technology, comparative science and technology policy, and management of innovation and technology. His most recent book, authored with Philip Auerwald, is

*Taking Technical Risks: Innovators, Executives and Investors Manage High Tech Innovations*. This book is based on studies performed for the NIST ATP program and is published by MIT press just last month. He and Auerswald are currently engaged in a follow-on study for ATP, tracing the sources of finance for the transition from invention to innovation.

#### **Appendix:**

Other recent books written or edited by LMB are: *Industrializing Knowledge: University- Industry Linkages in Japan and the United States* (edited with Fumio Kodama and Richard Florida, 1999); *Investing in Innovation: A Research and Innovation Policy that Works* (edited with James Keller, 1998); *Korea at the Turning Point: Innovation-Based Strategies for Development* (with H.Y. Choi, 1996); *Japanese Innovation Strategy: Technical Support for Business Visions* (with Fumio Kodama, 1993); *Empowering Technology: Implementing a U.S. Policy* (1993); *Converging Infrastructures: Intelligent Transportation and the National Information Infrastructure* (with James Keller, 1996); *Informed Legislatures: Coping with Science in a Democracy* (with Megan Jones and David Guston, 1996); *Confessions of a Technophile* (1994); and *Beyond Spinoff: Military and Commercial Technologies in a Changing World* (with J. Alic, et.al., 1992).

#### **BELINDA L. COLLINS**

Belinda L. Collins is the Director of NIST's Office of Standards Services, which provides policy support for standards and conformity assessment activities for Federal agencies. OSS administers programs in Laboratory Accreditation, Technical Standards Activities, Global Standards, and Standards Information, as well as the implementation of the National Technology Transfer and Advancement Act of 1995. Dr. Collins chairs the federal Interagency Committee on Standards Policy (ICSP), and is the immediate past chair of the International Laboratory Accreditation Cooperation (ILAC), as well as a former chair of the National Cooperation for Laboratory Accreditation (NACLA).

Dr. Collins received her M.A. and Ph.D. in experimental psychology (visual psychophysics) from the University of Virginia, and her B.A. in experimental psychology from Mary Washington College. While at NIST, she has served in several different positions, including research psychologist, Leader of the Lighting Group, Program Analyst in Office of the NIST Director, and Director of the Office of Standards Services. Dr. Collins has authored numerous technical publications and has been active in both domestic and international standardization. Dr. Collins is a Fellow of the Illumination Engineering Society of North America (IESNA) and served as its Vice President for Education (1995-1997). Dr. Collins received the NIST Bronze Medal in 1984 and the NIST Rosa Award in 2000. In 1997, she received a Meritorious Service Award from the American National Standards Institute, and a Public Service Award from ACIL. In 2000, she received the Lifetime Achievement Award from NACLA.

#### **LAWRENCE D. EICHER**

Dr. Lawrence D. Eicher became the Secretary-General of the International Organization for Standardization (ISO) in May 1986. He is the Chief Executive Officer of the Organization which has its headquarters in Geneva. Before joining ISO as Assistant Secretary-General in 1980. Dr. Eicher was Director of the Office of Engineering Standards at the National Bureau of Standards of the United States.

Dr. Eicher's career includes twenty-five years in educational, scientific, technical and administrative work. A native of Colorado (USA) he received a doctorate degree in physical chemistry at Texas A&M University in 1972 and continued his career with the National Science Foundation in Washington D.C. He is the author of numerous scientific papers, and a textbook on chemical analysis. He joined the National Bureau of Standards (USA) in 1974, and from that time he has been closely associated with international standardization.

#### **STEPHEN W. FREIMAN**

Dr. Stephen W. Freiman is Chief of the Ceramics Division at the National Institute of Standards and Technology (NIST) in Gaithersburg, MD.

Dr. Freiman graduated from the Georgia Institute of Technology with a B. ChE. and a M. S. in Metallurgy. He received a Ph.D. in Materials Science and Engineering from the University of Florida. Upon receiving his doctoral in 1968, Dr. Freiman worked at the IIT Research Institute and the Naval Research Laboratory. He joined NIST (then NBS) in 1978. Prior to becoming Chief of the Ceramics Division he served as Group Leader of the Electronic Materials Group in the Ceramics Division. Dr. Freiman has published over 150 papers focussing on the mechanical properties of brittle materials.

Dr. Freiman is a Fellow and a Past President of the American Ceramic Society (ACerS).

## **MATHIAS FÜNFSCILLING**

Mr. Funfschilling became President of the IEC on 1 January 1999 and was Treasurer from 1990-96. He is President and CEO of MGC Moser-Glaser Group. His recent career includes development work in plasma ultra-high temperature technology. He is past president of the Swiss NC and is a board member of the VSM Swiss Industry Board.

## **KATHARINE BLODGETT GEBBIE**

Katharine Blodgett Gebbie is Director of NIST's Physics Laboratory, which supports U.S. industry, government and the scientific community by providing measurement services and research for electronic, optical and radiation technologies. Its focus on atomic, molecular, optical and radiation physics reflects the continuing importance of these disciplines in developing new measurement technology.

Dr. Gebbie graduated from Bryn Mawr College with a B.A. degree in physics and subsequently earned a B.S. degree in astronomy and a Ph.D. in physics from University College London. She joined NIST in 1968 as a physicist in the Quantum Physics Division of JILA, a cooperative enterprise between NIST and the University of Colorado in Boulder. She has worked extensively on the physics of the solar and stellar atmospheres. Before being appointed Director of the newly formed Physics Laboratory in 1991, she served as Chief of the Quantum Physics Division and Acting Director of the Center for Atomic, Molecular and Optical Physics.

Dr. Gebbie is a Fellow of the American Physical Society, a Fellow of JILA, and a member of several professional societies including Sigma Xi and American Women in Science. She has served as Vice President of the International Committee on Weights and Measures and as President of the Consultative Committee on Temperature. She has received several awards, including the Department of Commerce Gold Medal, the Women in Science and Engineering (WISE) Lifetime Achievement Award, and the Washington Academy of Sciences Award for Outstanding Contributions to the Physical Sciences.

## **CASEY C. GRANT**

Casey C. Grant, P.E. is assistant vice president of Code & Standards Administration and assistant chief engineer at the NFPA, where his responsibilities include oversight for the nearly 300 NFPA codes and standards. In addition, Casey is also Secretary to the NFPA Standards Council, which is the primary administrative body of NFPA's codes and standards system. The NFPA is a non-profit membership organization established in 1896 with approximately 70,000 members from around the world dedicated to the cause of safety.

Casey has a Bachelor of Science degree from the University of Maryland and a Master of Science degree from Worcester Polytechnic Institute, both in Fire Protection Engineering. Among his other duties, he currently serves as Vice-Chair of the Executive Standards Council of the American National Standards Institute (ANSI). Casey is a Registered Professional Engineer in Fire Protection Engineering in the states of California and Tennessee, and is a member of both the Beta and Gamma Chapters of the Salamander Fire Protection Honorary Society.

Casey has given numerous presentations on fire safety around the world, and he is the editor for the fire safety section of the ILO Encyclopedia on Occupational Health and Safety. He is a member of the USA Branch of the Institute of Fire Engineers, and holds a member grade in the Society of Fire Protection Engineers. Casey has one safety related U.S. Patent, and he is a recipient of an award from the United States Environmental Protection Agency for his work helping to implement alternatives for the world-wide phase-out of CFCs and halons.

## **MICHAEL D. HOGAN**

Michael D. Hogan is responsible for liaison with the voluntary standards community for the Information Technology Laboratory (ITL) at the National Institute of Standards and Technology (NIST). He represents NIST at national and international voluntary standards organizations that manage the development of standards and associated testing methodologies for information technology (IT), and he participates in the development of policies on standards and conformity assessment issues.

In 1996, he convened an inter-laboratory study group at NIST to explore the concepts of metrology and their application to information technology systems, and to relate measurements in IT to established metrology theories, such as traceability. The group's study was published in May 1997 as NISTIR 6025, *Metrology for Information Technology*.

From 1994 to 1997, Mr. Hogan chaired the Information Systems Standards Board of the American National Standards Institute. He is past vice chairman of the JTC 1 TAG Advisory Committee (1988 to 1992). Mr. Hogan has

served as a member of the JTC 1 TAG since its inception in 1988. The JTC 1 TAG represents the U.S. in the development of international IT standards within ISO/IEC Joint Technical Committee 1 on Information Technology. From 1987 until the present, he has represented NIST at the management and policy level on the National Committee for Information Technology (NCITS), previously the Accredited Standards Committee X3, Information Technology. From 1975 to 1989, Mr. Hogan was the principal technical expert representative from NIST to several X3 Technical Committees, including B1 (Digital Magnetic Tape), B5 (Magnetic Tape Cassettes and Cartridges), and B8 (Flexible Disk Cartridges). He served as the International Representative for these Technical Committees from 1979 to 1989. Mr. Hogan also served as the U.S. Head of Delegation to ISO/IEC JTC 1/SC 11, Flexible Magnetic Media for Digital Data Interchange, from 1979 to 1989.

Mr. Hogan has been a member of the NIST staff since 1974. From 1982 to 1987, he managed the Computer Storage Media Group, which conducted research in methods to characterize and measure magnetic and optical digital data storage media. In previous positions at NIST, he developed reference measurement services and data interchange standards for computer storage media.

Mr. Hogan graduated with honors (member of Eta Kappa Nu) with a B.S. degree in electrical engineering from the University of Maryland in 1973. In 1967, he was a Distinguished Graduate of the Infantry Officer Candidate School at Fort Benning, Georgia. During 1968 and 1969, Lieutenant Hogan served in Vietnam as an executive officer, an operations officer, and a platoon leader for U.S. Army units attached to the 199th Light Infantry Brigade and to the 1st Infantry Division.

## **MARK W. HURWITZ**

Dr. Mark W. Hurwitz, CAE, was named President and CEO of the American National Standards Institute (ANSI) by its Board of Directors on July 1, 1999.

ANSI is a not-for-profit membership organization that brings together organizations from both the private and public sectors dedicated to furthering U.S. and international voluntary consensus standards and conformity assessments. ANSI accredits national standards developing organizations and approves American National Standards. It is the sole U.S. representative to the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), via the U.S. National Committee.

Before joining ANSI, Dr. Hurwitz served as chief executive officer and executive vice-president of the American Institute of Architects (AIA). He is a past executive vice-president of the Building Owners and Managers Association International (BOMA) and a former senior vice-president and chief operating officer of the National Association of Professional Insurance Agents. Dr. Hurwitz, who founded the Center for Association Leadership in Princeton, N. J., an association management consulting firm, is a frequent speaker at association management symposia and has been a guest professor at several colleges and universities.

Dr. Hurwitz earned a doctorate in administration from Temple University in Philadelphia. He and his wife, Josette, reside in Alexandria, Virginia.

## **RAYMOND KAMMER**

Raymond Kammer was nominated by President Clinton on September 4, 1997, to serve as Director of the National Institute of Standards and Technology. After being confirmed by the U.S. Senate, he took office on November 12 and remained as Director of NIST until his retirement in December 2000. An agency of the U.S. Commerce Department's Technology Administration, NIST promotes U.S. economic growth by working with industry to develop and apply technology, measurements, and standards. As NIST Director, Mr. Kammer oversaw a staff of approximately 3,300 and a budget of about \$700 million. More than half of the staff is composed of scientists and engineers located at the NIST campuses in Gaithersburg, Maryland, and Boulder, Colorado.

Previously, Mr. Kammer served on an acting basis as the Chief Financial Officer, the Assistant Secretary for Administration and the Chief Information Officer for the Department of Commerce. As Deputy Director of NIST from 1980 to 1991 and 1993 to 1997, Mr. Kammer was responsible for the day-to-day operation of the Institute and for long-range planning and policy development. The primary mission of NIST is to promote U.S. economic growth by working with industry to develop and apply technology, measurements, and standards. This mission is accomplished through four major programs:

- Measurement and Standards Laboratories focused on "infrastructural technologies," such as measurements, standards, evaluated data and test methods;

- a competitive Advanced Technology Program that provides cost-shared awards to industry for development of high-risk, enabling technologies with broad economic potential;
- a grassroots Manufacturing Extension Partnership with a network of local centers offering technical and business assistance to smaller manufacturers; and
- a highly visible organizational improvement program associated with the Malcolm Baldrige National Quality Award.

From 1991 to 1993, Mr. Kammer was Deputy Under Secretary of Commerce for Oceans and Atmosphere in NOAA. In that position, he served as NOAA's Chief Operating Officer and was responsible for overseeing the technical projects of this \$2 billion agency which has a staff of over 14,000. NOAA has five major programs—the National Weather Service; the National Marine Fisheries Service; the National Environmental Satellite, Data, and Information Service; the National Ocean Service; and the Office of Oceanic and Atmospheric Research.

Mr. Kammer began his career with the Department of Commerce in 1969 as a program analyst. Prior to his appointment as Deputy Director of NIST, Mr. Kammer held a number of positions at NIST and in the Department of Commerce involving budgetary and program analysis, planning and personnel management. During his tenure as Deputy Director, he also held positions as Acting Director of NIST, Acting Director of the National Measurement Laboratory at NIST, and Acting Director of the Advanced Technology Program at NIST.

Mr. Kammer has chaired several important evaluation committees for the Department of Commerce, including reviews of satellite systems for weather monitoring and the U.S. LANDSAT program, and of the next generation of weather radar used by the U.S. Government. He also served on the Board of Directors of the American Society for Testing and Materials, a major international society for the development of voluntary standards for materials, products, systems, and services.

His awards include both the Gold and Silver Medals of the Department of Commerce, the William A. Jump Award for Exceptional Achievement in Public Administration, the Federal Government Meritorious Executive Award, and the Roger W. Jones Award for Executive Leadership.

Mr. Kammer received his Bachelor of Arts degree from the University of Maryland in 1969.

## **RICHARD F. KAYSER**

Dr. Kayser received a Sc.B. in physical chemistry from Brown University in June 1973 and a Ph.D. in physical chemistry from Rice University in May 1976. He moved to the National Bureau of Standards (now the National Institute of Standards and Technology) in May 1976 as a National Science Foundation Postdoctoral Fellow and joined the Thermophysics Division as a permanent staff member one year later.

Over the next ten years, Dr. Kayser performed research on a wide variety of theoretical and experimental topics, ranging from phase transitions to wetting phenomena. During that time, he published approximately 40 papers in the peer-reviewed archival literature.

Dr. Kayser became Chief of the Thermophysics Division in May 1989 and Chief of the Physical and Chemical Properties Division in May 1996. In these positions, he was responsible for NIST's programs on the thermophysical and thermochemical properties of gases, liquids, and solids; the rates and mechanisms of chemical reactions in the gas and liquid phases; process separations and low-temperature refrigeration, heat transfer, and flow; and pressure, vacuum, and low-flow-rate measurements and standards, including the U.S. national standards in those areas.

Dr. Kayser assumed the position of Director of Technology Services in August 1999. Among its activities, Technology Services supports the NIST Measurement and Standards Laboratories in the provision of calibrations, Standard Reference Materials, and Standard Reference Data; promotes accuracy and uniformity throughout the States in weights and measures; conducts the National Voluntary Laboratory Accreditation Program; and facilitates trade by promoting the efficient development and use of U.S. standards and technology and by reducing technical barriers to trade.

## JUNE LING

As Associate Executive Director, Codes and Standards, June Ling is responsible for the codes, standards, and conformity assessment activities of the American Society of Mechanical Engineers (also known as ASME International).

Ms. Ling joined the Society's technical codes and standards staff in July 1974 and holds a B.S. in Physics. Prior to becoming Associate Executive Director, Ms. Ling served as Managing Director, Operations, during which time she was responsible for the publication and sales of ASME codes and standards and the administration of the Society's accreditation and certification activities, including the establishment of ASME as an accredited ISO 9000 registrar program.

Her previous positions at ASME included Director, Pressure Technology Codes and Standards [1990–1992], Director, Nuclear and Safety Codes and Standards [1985–1990], and Director, Nuclear Codes and Standards [1980–1985].

During her 26 years with the Society, Ms. Ling served on various ASME committees and supervisory boards and interacted with government agencies, industry and standards developing organizations around the world.

Ms. Ling serves on the Board of Directors of the American National Standards Institute and the Board of Directors of the Uniform Boiler and Pressure Vessel Laws Society. She is a member of the Industry Functional Advisory Committee on Standards for Trade Policy Matters (IFAC 2) under the Department of Commerce and USTR, and is a Fellow of the Standards Engineering Society and an ASME Fellow.

## MARY C. MCKIEL

Dr. McKiel began her Federal career in 1976 as an analytical chemist at the *National Archives and Records Service* (now an independent Administration). There, she developed chemical methods for restoring and preserving textual and non-textual materials. As a member of the US Group to ISO Technical Committee (6) on Paper, she participated in developing international standards for archival quality paper.

From 1982 to 1993, Mary served in several capacities at the *Federal Supply Service of the General Services Administration*: Chief of Engineering and Standards Policy, Director of Quality Standards, and Director of Environmental Planning. At GSA, among other achievements Mary instituted and managed quality control and assurance programs for the Service, and developed and published GSA's first "green" catalog. She earned several Outstanding Service awards and medals while at GSA.

In 1993, she joined the *Environmental Protection Agency* in the Office of Prevention, Pesticides and Toxic Substances. With the approval of EPA's Administrator, she initiated and managed the EPA's first cross-office program for voluntary standards. As Director of the EPA Standards Network, she coordinated Agency use of non-government standards and managed EPA's participation in the US Technical Advisory Group (TAG) for the development of the ISO 14000 standards for Environmental Management. She was elected Vice Chair of the US TAG and continues to serve in that capacity.

In 1998, Mary was appointed by to the position of EPA Standards Executive. As such, her role is Agency-wide in responsibility and includes implementing the National Technology Transfer and Advancement Act and OMB Circular A-119 throughout EPA. She heads up the Agency's Standards Program and represents the Agency on the Interagency Committee for Standards Policy. Mary represents EPA standards policies in national, regional and international standards-related fora, the International Organization for Standardization (ISO), the Pacific Area Standards Congress (PASC) and the South American Congress for Norms and Technical Standards (COPANT). She has earned the 1998 EPA Administrator's Silver Medal for Excellence in Service, as well as Silver and Bronze Agency medals from 1996 to the present.

Mary currently serves as a Vice Chair on the Board of Directors of the American National Standards Institute (ANSI) and is immediate past Chair of ANSI's Government Member Council. She has served on the Board of Directors for the International Policy Institute in Washington and represented the US in international environmental discussions involving standards through the United Nations Environmental Program (UNEP) and the United Nations Committee on Trade and Development (UNCTAD) as well as in the Organization for Economic Cooperation and Development (OECD).

Mary has numerous publications on standards and standards in regulations and regularly makes national and internationally presentations on standards-related topics.

## **ROBERT W. NOTH**

As Manager of Engineering Standards for Deere & Company, Bob Noth is responsible for overseeing the development, deployment, utilization and administration of standards affecting the Deere product line worldwide. This includes responsibility for development and implementation of strategies and processes that effectively avoid redundant and/or unnecessary parts and components from entering Deere's products and product support system.

A graduate of the University of Dubuque with a BA in mathematics, Bob joined Deere in 1965 as an Industrial Engineer at the Dubuque Works. At Dubuque he held positions in IE, Value Analysis, Production and General Supervision and as a Division Engineer in IE installed the Deere Incentive System as part of the start up of the Davenport Iowa Industrial Equipment Factory. In 1976 Bob transferred to Corporate Headquarters as a Division Manager in IE, responsible for Incentive System integrity and grievance investigation. From 1977 to 1985 he managed Industrial and Assembly Process Engineering in Deere's Horicon, Wisconsin Factory in the Commercial and Consumer Equipment Division. He returned to corporate headquarters in 1985 as a Senior Division Manager in Industrial Engineering responsible for indirect labor and office productivity improvement programs. In 1989 he became the Manager of Parts Standardization Programs. He assumed his current position in the July of 1992.

Bob is active in several professional societies and standards developing organizations. He is a past chair of the SAE Technical Standards Board and is currently on the SAE Board of Directors. He sits on committee PM 03 of the American Society of Agricultural Engineers (ASAE) and retains his membership in the Institute of Industrial Engineers (IIE). He became involved with the ANSI Company Member Council Executive Committee in 1991 and served as its Vice Chair from 1992 until 1997. He was Vice Chair of the ANSI Standards and Data Services Committee (SDSC) during the development of the NSSN and represented the U.S. on the joint ISO/IEC Information Technology Strategy Coordination and Implementation Groups. He served as head of the ANSI delegation to the ISO Information Committee (INFCO) for 3 years as part of duties in the SDSC. He also participated on the ad hoc advisory group to ANSI during the latest re- negotiation of the POCOSA agreement. He currently represents Deere & Company on ICSCA, the International Cooperation on Standards and Conformity Assessment.

## **STEPHEN P. OKSALA**

Mr. Oksala is the Vice President of Standards for the Society of Cable Telecommunications Engineers (SCTE). In this position he is responsible for a wide- ranging standards program for the cable telecommunications industry covering topics from connectors to cable modems. Prior to joining SCTE at the beginning of 2001 he spent 35 years with the Unisys Corporation, including 13 as Director of Standards and Regulatory Compliance. He also held management positions in system design, hardware design, operating systems and languages, and applications development.

Mr. Oksala has been a member of the Board of Directors of the American National Standards Institute since 1990. He chairs the Board National Issues Committee, which is responsible for domestic standards and government relations policy, and is a member of the International Committee and Board Committee on Conformity Assessment.

Mr. Oksala was the 1999 recipient of the ANSI Edward Lohse medal for standardization in Information Technology and has twice (first place in 1996 and second place in 2000) won awards in the World Standards Day paper contest. He has testified before Congress on several occasions on the subject of standards and conformity assessment and the role of government in these processes.

Mr. Oksala holds a BSEE from the University of Michigan, and an MBA from Wayne State University, and resides with his wife Junede in Exton, Pennsylvania.

## **ARATI PRABHAKAR**

Arati Prabhakar is a venture partner at U.S. Venture Partners in Menlo Park, California. From 1986 to 1993, Arati worked at the Defense Advanced Research Projects Agency, initially as a program manager and subsequently as director of the Microelectronics Technology Office. In 1993, President Clinton appointed Arati as the director of the National Institute of Standards and Technology. Arati joined Raychem Corporation as senior vice president and chief technology officer in 1997. She was subsequently vice president and then president of Interval Research Corporation, which she joined in 1998.

Arati received her B.S. in Electrical Engineering from Texas Tech University. She received an M.S. in Electrical Engineering and a Ph.D. in Applied Physics from the California Institute of Technology. Arati began her career as a Congressional fellow at the Office of Technology Assessment. She is a Caltech Distinguished Alumna and a Texas Tech Distinguished Engineer. Arati is a Fellow of the Institute of Electrical and Electronics Engineers.

## **ED RONEY**

Ed Roney has been with Motorola since 1978, first as IPR Counsel for Motorola's communications businesses, and now as Corporate Vice President and Director of Standards and Technology Transfer.

Prior to Motorola, Ed was with Schlumberger, Ltd. as Patent Counsel, Oilfield Services Sector. He started his career as an engineer with Martin Marietta and later as a patent examiner in the computer section of the U.S. Patent Office.

He has a law degree from Georgetown University and electrical engineering degree from the University of Virginia. He was admitted to practice law in Washington, D.C. and Texas and to practice before the U. S. Patent and Trademark Office.

He is a member of the Board of Directors of ITI and IEEE-ISTO and a member of various other associations. He is chairman of ITI's Committee on Standards, Technology and Trade.

Ed is married with three children and lives in Barrington, Illinois.

## **GREGORY E. SAUNDERS**

Gregory E. (Greg) Saunders is the Director of the Defense Standardization Program Office (DSPO). This office serves as the Secretary's Executive Agent for the Defense Standardization Program. In this capacity Greg is responsible for all facets of implementing Mil Spec Reform and for policies and procedures on Defense Standardization including the development and use of Qualified Manufacturers Lists, use of industry standards, development of performance specifications and Commercial Item Descriptions. The DSPO also facilitates greater use of commercial products and nondevelopmental items (NDI), and the use of more commercial buying practices. Greg is the vice-chair of the Defense Standardization Council.

Prior to this assignment, Greg was the Deputy Director for Acquisition Practices in the Office of the Secretary of Defense where he was responsible for many of the same issues and was one of the principal proponents of commercial and NDI acquisition. He served on two Defense Science Board Studies on Use of Commercial Components in Defense Systems, both chaired by Secretary Perry, and was responsible for DoD's implementation of their recommendations; has testified before congress on DOD's progress implementing a statutory preference for NDI; and has served on numerous study groups.

Before 1986, Mr. Saunders was a staff member of the Defense Materiel Specifications and Standards Office where he was responsible for the DoD's program to adopt and use standards produced by voluntary standards organizations and for various other aspects of standardization policy.

He is an engineering graduate of the University of Evansville in Evansville Indiana. Greg is on the Boards of Directors of ASTM and the American National Standards Institute (ANSI). He serves on the Aerospace Council of the Society of Automotive Engineers, and has chaired ANSI's Government Member Council and the Standards and Data Services Committee. He is the U.S. representative to a NATO Board and is the Department of Defense Representative on the Interagency Committee on Standards Policy.

Mr. Saunders has won numerous awards including the Vice President's Golden Hammer Award, the Department of Defense Civilian Service Award, the Joint Meritorious Unit Award, ANSI's Meritorious Service Award and industry's Equal Partner Award.

Greg lives in Herndon Virginia with his wife, two dogs and four cats. He is active in church work and enjoys furniture making, guitar playing, and auto racing.

Greg may be reached at his internet address: "Gregory\_Saunders@HQ.DLA.MIL" or by telephone at (703) 767-6888.

## **OLIVER R. SMOOT**

Oliver Smoot was elected chairman of the American National Standards Institute (ANSI) Board of Directors on December 7, 2000. He also serves as vice-president for external voluntary standards relations of the Information Technology Industry Council (ITI), a post to which he was appointed in 2000 to support ITI's activities in voluntary standards domestically and internationally.

Before being elected as chairman of the ANSI Board, Mr. Smoot served in numerous ANSI leadership posts, including service as chair of ANSI's Finance Committee, Organizational Member Council and Patent Group.

Before being elected ITI's vice-president for external voluntary standards relations, Mr. Smoot held the post of ITI's executive vice-president for 23 years. During this tenure he was responsible for ITI's internal activities including the association's technical regulatory activities and its voluntary standards activities: the National Committee for



Information Technology Standards (NCITS) and the U.S. Technical Advisory Group (TAG) to ISO/IEC JTC 1, the Joint Technical Committee 1 on Information Technology Standards of the International Organization for Standardization and the International Electrotechnical Commission.

An active member of the American Bar Association for many years, Mr. Smoot currently serves as chairman of its Technical Standardization Law Committee and has previously served as chairman of the Section on Science and Technology Law. He has also served in numerous positions with the Computer Law Association, culminating as President, and currently serves on the Executive Committee of the U.S. Policy Committee of the Association for Computing Machinery (ACM).

Mr. Smoot has served on numerous international delegations and U.S. Governmental advisory committees. He received a Juris Doctor from Georgetown University and a Bachelor of Science from the Massachusetts Institute of Technology.

## **JACK SNELL**

Jack Snell came to NBS in 1971 after hearing then Director, Lou Branscomb describe NIST's main thing as "facilitating technical innovation for the public benefit." Snell's duties at NIST have included responsibility for energy programs, fire research and now the Building and Fire Research Laboratory. He is particularly excited about the implications of advances in science and technology for the future of construction and buildings and for reducing losses to fire and other disasters.

Dr. Snell has a BSE in Aeronautical Engineering from Princeton, and a MSE in Industrial Engineering and Operations Research and PhD in Civil Engineering from Northwestern. He is a recipient of the Commerce Department's Silver and Gold medals.

## **KEITH TERMATT**

Mr. Keith Termaat is Exterior Technology Manager for Ford Motor Company. He standardizes and innovates technologies and migrates them to brands. Exterior systems, including visibility, are a US \$4 billion commodity. Keith is active in standardization policy and governance as a Director on the ANSI Board, member of the Board Executive and Finance Committees and past-chair of the ANSI Company Member Council. He also chairs the SAE Technical Standards Board.

Mr. Termaat has held senior management positions in automotive technology development standardization, strategic planning and automotive engineering.

Mr. Termaat holds BS and MS degrees in Engineering from the University of Michigan. His upbringing in the Netherlands and the United States contributes to a well-formed world view.

## **JAMES A. THOMAS**

James A. Thomas, president of ASTM, is a native of Philadelphia, Pennsylvania. He received his bachelor of science degree in industrial relations in 1976, and his master's degree in organization and management in 1990, both from LaSalle University.

Thomas has devoted his entire career to ASTM, where he has served in various positions since 1972. His career has been concentrated on association management and the issues facing voluntary standardization.

In 1983, Thomas was promoted to vice president of the Standards Development Division, where he was responsible for all ASTM technical committee operations, including guiding new technical committees in the early stages of their development and for representing ASTM in standards development activities with other organizations.

Thomas was appointed executive vice president of the Society in 1987. His responsibilities in that office included directing the development and implementation of operating policies, and the analysis and evaluation of operations to assess attainment of growth and financial objectives.

His appointment as president of ASTM became effective on July 1, 1992.

Thomas is a member of the Standards Engineering Society, the Council for Engineering and Scientific Society Executives, the American Society for Association Executives, and the Industry Functional Advisory Committee on Standards for Trade Policy Matters. He also serves on the Board of Directors of the American National Standards Institute.

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